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ABSTRACT

Thirty word-search puzzles on mathematics and mathematicians are presented. The puzzles are used periodically as homework assignments in a self-paced, individualized mathematics program which is designed to improve the achievement of junior high school students. Answers to the puzzles are not included. (DC)

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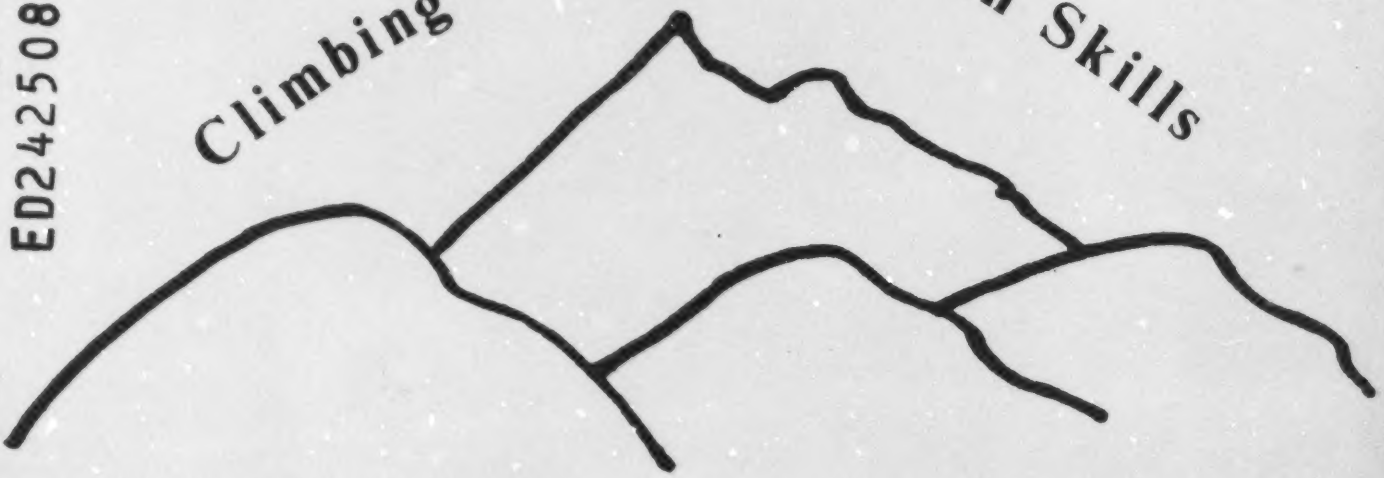

CALIFORNIA DEMONSTRATION MATHEMATICS PROGRAM

WORD SEARCH PACKET

U.S. DEPARTMENT OF EDUCATION
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Hillview Junior High

Pittsburg Unified School District

Pittsburg, California

SE044132

WORD SEARCHES

1. NUMBER SYSTEMS AND LEVEL A
2. NUMBER WORDS
3. GREEK MATHEMATICIANS
4. ITALIAN MATHEMATICIANS
5. WHOLE NUMBER OPERATIONS
6. ANCIENT WORLD MATHEMATICIANS
7. WORKING WITH WHOLE NUMBERS
8. FRENCH MATHEMATICIANS
9. FRACTIONS
10. FAMOUS U. S. MATHEMATICIANS
11. ENGLISH MATHEMATICIANS
12. DECIMALS
13. GERMAN MATHEMATICIANS
14. FAMOUS MATHEMATICIANS OF OTHER COUNTRIES
15. RATIOS, PROPORTIONS, PERCENTS
16. FAMOUS MEN OF ALGEBRA
17. FAMOUS MEN OF GEOMETRY
18. GEOMETRY I
19. GEOMETRY II
20. POLYGONS
21. FAMOUS MEN OF CALCULUS
22. ENGLISH MEASUREMENT
23. FAMOUS MEN OF MATH
24. METRIC SYSTEM
25. FAMOUS MATHEMATICIANS IN SCIENCE
26. FAMOUS MEN IN SOME DIFFERENT FIELDS OF MATH
27. MATH CLASSES
28. CAREERS USING MATH
29. PERIMETERS, AREA, SURFACE AREA, VOLUME
30. ADVANCED TOPICS PRE-ALGEBRA

The word searches in this packet are used periodically as the last page of our homework packets.

Capitalized words at the bottom of each page are all in the block of letters above. Words can be vertical, horizontal or diagonally.

We hope you can use some of these on those rainy Fridays or as a way to introduce different levels in mathematics. The word searches based on our program levels provide a great spelling list.

Name _____ Period _____ Date _____

1) NUMBER SYSTEMS AND LEVEL A

E E L P O P L A C E V A L U E T
D X S T I C K O R Q U X O Y V H
E P P L L A I A A A A O T L E O
C O P A O L D P L F B G U F N U
I N K N N I Q O N E S I S H J S
M E L A G D U N S T O T C A F A
A N M I N H E E L B O N E A F N
L T T T H U N D R E D S O I O D
S S N P W X Q L N X X P S A G S
Y M O Y L L A T O O S H O A N L
S J B G C E C M O A T N P D I K
T E D E H S I N O T S A E A D S
E E E E L A C P O W E R T T N T
M S S Y M B O L S L L E X I U O
E S B S L A R E M U N N A M O R
C O M P A C T F O R M P N O R N

DIGITS
SYMBOLS

Ancient EGYPTIAN Symbols
TALLY Mark /
HEELBONE ∩
COIL of Rope 𓆉
LOTUS Flower 𓆸
Bent STICK 𓇋
FISH 𓆟
ASTONISHED Man 𓀠

ROMAN NUMERAL Symbols
(I V X L C D M)

Hindu ARABIC Symbols
(0,1,2,3,4,5,6,7,8,9)

DECIMAL SYSTEM

PLACE VALUE
Base TEN
ROUNDING OFF
ONES
TENS
HUNDREDS
THOUSANDS

EVEN - (0,2,4,6,8)
ODD -(1,3,5,7,9)

COMPACT FORM
EXPANDED NOTATION (3x100+2x10+5x1)
FACTORS
POWER
EXPONENTS → 3
BASE → 4

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Name _____ Period _____ Date _____

2) NUMBER WORDS

Q M I L L I O N T Y T X I S E T E
R U O F S I X T E E N L O O I I I
X L P E E L I N N N A W A P G Y G
Y T N E V E S N E E T R I H T T H
T B E T E N I N E V O L T W H R U
R I E W N I N E T E E N E R O O N
I L T E T N E I R S E L E N U F D
H L H N E T N G U X V E E L S I R
T I G T E E T H O E I E Q A A F E
X O I Y N E E T F I F E U S N T D
L N E O P N E Y T E N I N E D Y E

ONE
TWO
THREE
FOUR
FIVE
SIX
SEVEN
EIGHT
NINE
TEN

ELEVEN
TWELVE
THIRTEEN
FOURTEEN
FIFTEEN
SIXTEEN
SEVENTEEN
EIGHTEEN
NINETEEN
TWENTY

THIRTY
FORTY
FIFTY
SIXTY
SEVENTY
EIGHTY
NINETY
HUNDRED
THOUSAND
MILLION
BILLION

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3) GREEK MATHEMATICIANS

Y M E L O T P Y T H A G O R A S
L O R E H S H Y P A T I A Q P E
A D E M O C R I T U S S R U O T
L M E N A E C H M U S Z I K L A
T E R A T O S T H E N E S S L R
H N A R C H Y T U S J N T U O C
A E Z X P A P P U S K D A X N O
L L E P L A T O X O S I R O I P
E A N A X A G O R A S L C D U P
S U O L L H I P P A R C H U S I
A S U T N A H P O I D U U E O H
L K M A R C H I M E D E S N O N

Algebra
DIOPHANTUS

Astromony
ANAXAGORAS
ARISTARCHUS of Samos
EUDOXUS

Calculus
ARCHIMEDES of Samos
DEMOCRITUS

Geometry
APOLLONIUS
ARCHYTUS
EUCLID
HERO of Alexandria
HIPPOCRATES
MENAECHMUS
PAPPUS
PLATO
PTOLEMY
PYTHAGORAS
THALES

Math

ERATOSTHENES
HYPATIA
ZENO

Trigonometry
HIPPARCHUS
MENELAUS

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4) ITALIAN MATHEMATICIANS

M B O E T H I U S P A C I O L I
O E C A L A N D R I S F L A F G
N L A A H P S T P V W I U U E N
T T R U V F E R R O A B C T R I
E R D C I A F A T L J O C S R K
C A A C N G L S O T A N E X A I
S M N K L T S I B E C A L L R N
O I O P E A N O E R O C L K I G
R G A L I L L E O R B C O A P S
I T A R T A G L I A I I X L W A

Algebra
- CARDANO
- FERRARI
- PACIOLI

Calculus
- CAVALIERI
- JACOBI
- VOLTERRA

Geometry
- BELTRAMI
- VCCELLO

Math
- BOETHIUS
- CALANDRI
- FERRO
- FIBONACCI
- MONTESSORI
- PEANO
- TARTAGLIA

Math/Science
- GALILLEO

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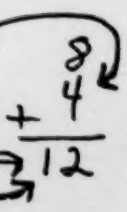
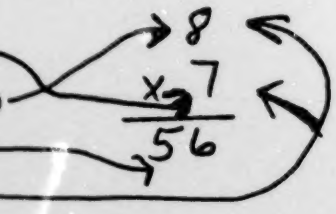
5) WHOLE NUMBER OPERATIONS

S M U L T I P L I E R L A B
U I U Y R R A C X O E B C F
B N A L A T O T S E M I T Q
T U E P T L O I S R A D P P
R E K I A I V K E L I O R Q
A N L T D I P U L F N O P U
C D P L D S T L F O D L E O
T Q L U E V K E I U E O D T
W S U M N U R S C C R D I I
O A S O D E I T K E A E V E
R L T O N V K V R S J N I N
R R R C I D I V I D E N D T
O P E D N E H A R T B U S P
B L F A C T O R S E L O H W

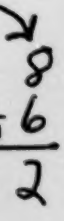
ADD
ADDEND
SUM
TOTAL
PLUS
CARRY



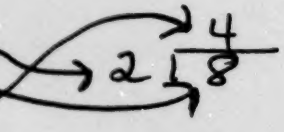
MULTIPLY
MULTIPLIER
MULTIPLICAND
PRODUCT
FACTORS
TIMES



SUBTRACT
SUBTRAHEND
MINUEND
DIFFERENCE
BORROW
LESS



DIVIDE
DIVISOR
DIVIDEND
QUOTIENT
REMAINDER
DIVISION



WHOLE numbers

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6) ANCIENT WORLD MATHEMATICIANS

A L K H O W A R I Z M I R
R S C H U S H I K E I A A
Y B U C A L K A S K I D M
A C A S E Y B O N F I L A
B K H F U F Y G H I J K N
B O M I I N L A M N O P Y
A W E L E Q G R M S T U A
T A S U B H A S K A R A M
A L B I R U N A L D I N W

Algebra

AHMES (Egyptian)
AL-KHOWARIZMI (Arab)
KHAYYEM (Persian)
Shih CHIEH (Chinese)

Calculus

KOWA (Japanese)

Geometry

ARYABBATA (India)

Math

BHASKARA (India)
BONFIL (Arab)
CHU SHI KEI (Chinese)
AL-KASKI (Arab)
RAMANYAM (India)

Math/Science

AL-BIRUN (Afghanistan)
SU SUNG (Chinese)

Trigonometry

AL-DIN (Arab)

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7) WORKING WITH WHOLE NUMBERS

L A R G E S T O L A S C E N D I N G
A B A R E K W K E B R A C K E T S N
P A R E N T H E S I S O L K M N E I
A S J A C U O F S P T O R D E R X D
V E C T C K L F T Q C X S Q X P P N
E N R E U E E R H N A L A D D R O E
R W O R D L S D A T R X R S E S N C
A T U T R O N X N D T D I V I D E S
G M F H A L F W A Y B E T W E E N E
E E N A Y L P I T I U M R P S E T D
L C D N R I G H T D S M A L L E S T

WHOLE numbers
GREATER THAN >
LESS THAN <
ASCENDING order - smallest to largest
DESCENDING order - largest to smallest
LARGEST
SMALLEST

EXPONENT → 3
BASE → 4

ORDER of operation
1) PARENTHESIS
2) BRACES
3) BRACKETS
4) MULTIPLY and DIVIDE LEFT to RIGHT
5) then ADD and SUBTRACT left to right

AVERAGE
HALFWAY BETWEEN

WORD problems

State Demonstration Program
Pittsburg Unified School District

Name _____ Period ___ Date _____

8) FRENCH MATHEMATICIANS

L E G E N D R E F L S D O S F
L A G R A N G E O A X A M S E
S I O L A G M S U L D L E L R
E C C A R T E N R I E E S A M
U A M C U K R K I O M M M P A
G U O S W X E Y E U O B E L T
R C N A Z O O L R V I E T A N
A H G P I C A R D I R R I C A
S Y E F P O N C E L E T M E D
E L E B E S Q U E L L S R E R
D E S C A R T E S E T S E A O
P I O N C A R E A L T O H L J

Algebra
GALOIS

Calculus
CAUCHY
LEBESQUE
LIOUVILLE
PICARD
PIONCARE

Geometry
CARTEN
DESARGUES
DESCARTES
FERMAT
LEGENDRE
MONGE
OMESME
PONCELET

Math
HERMITE
LAGRANGE

Math/Science
D'ALEMBERT
FOURIER

Probability
de MERE
de LA PLACE
PASCAL
DE MOIRE

Topology
JORDAN

Trigonometry
VIETA

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Name _____ Period _____ Date _____

9) FRACTIONS

R F R A C T I O N S R E D U C E C
E O E D I V I S I B I L I T Y C O
C D E N O M I N A T O R N S P O M
I S S U A X C H A N G E R T A M P
P U I M I X E D M N L O P B R P L
R B M E L K F G F A C T O R T O E
O T P R I M E I V O A R D F S S X
C R L A K X M I M P R O P E R I P
A A E T V W U L H O A D D W X T R
L C B O S Q P M W N D I V I D E O
B T G R E A T E S T C O M M O N P
L O W E S T S M U L T I P L Y O E
A C A N C E L L A T I O N H I H R

DIVISIBILITY rules
PRIME
COMPOSITE
FACTOR
GREATEST COMMON denominator
NUMERATOR
DENOMINATOR
FRACTIONS
PROPER or SIMPLE fractions – $\frac{2}{3}$
IMPROPER fractions – $\frac{3}{2}$
MIXED number – $1\frac{1}{2}$
EQUIVALENT fractions
PARTS

COMPLEX fractions – $\frac{\frac{3}{4}}{\frac{5}{7}}$
REDUCE to lowest terms
LOWEST common denominator
CHANGE
ADD
SUBTRACT
BORROW
MULTIPLY
CANCELLATION
DIVIDE
RECIPROCAL

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Name _____ Period _____ Date _____

10) FAMOUS U.S. MATHEMATICIANS

B E I L E N B E R G N A E F
A B K T A S H A N N O N N R
N I U A E P O N I L L P E A
N R W S S L L S T K O M U N
E K E X H N L G O D E L M K
K H I A L A E E K L C N A L
E O N M K G R R R D E L N I
R F E O P E I N S T E I N N
L F R T S L T W E A V E R S
K S Z E B E H E L Y U L A M

Computers
AIKEN
BUSH
VON NEUMANN

Geometry
BIRKHOFF
KASNER

Logic/Probability
NAGEL
WEAVER

Math
EILENBERG
GODEL

Math/Science
BANNEKER
EINSTEIN
FRANKLIN
HOLLERITH
SHANNON
SZEBEHELY
TELLER
ULAM
WEINER

State Demonstration Program
Pittsburg Unified School District

Name _____ Period ____ Date _____

11) ENGLISH MATHEMATICIANS

B A C O N A L L S L W O A P Q O
O A T C A Y L E Y O H A L X U U
O S B A R R O W L C I S J N V G
L M N B H N N E V A T W O O D H
E K O H A R D Y E R E P N T G T
D E M O R G A N S R H L E L U R
S G G I R B E A T O E M S A N E
W A L L I S A D E L A R D G T D
N I V L E K E S R L D M M N E O
K N E W T O N R U S S E L L R P

Algebra
- BOOLE
- DEMORGAN
- HARRIET

Computer
- BABBAGE

Calculus
- BARROW
- SYLVESTER
- WALLIS

Geometry
- ADELARD of Bath
- BRIGGS
- CAYLEY
- HARDY

Logic Probability
- WHITEHEAD

Math
- CARROLL
- GUNTER
- JONES
- OUGHTRED
- RUSSELL
- VENN

Math/Science
- ATWOOD
- BACON
- GALTON
- KELVIN
- NEWTON

State Demonstration Program
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Name _____ Period ___ Date _____

12) DECIMALS

D O O S A N D D O L L A R M O P H
E L T E R M I N A T I N G I N Q U
S F H C G I V K C T L N C L Q U N
C G O A H X I J E C M E H L S A D
E N U L D E D S N A R X A I L R R
N I S P T D E U T R V I N O A T E
D D A W R E P E A T I N G N M E D
I N N M O N E Y X B E G E T I R T
N E D Y L P I T L U M Z M H C Y H
G C T N I C K E L S I E R S E Z S
A S H T E N T H S T D R O C D O T
B A S R O U N D I N G O F F D E F
W O R D P R O B L E M S P O I N T

ADD
AND (word for decimal point)
ANNEXING ZEROS
ASCENDING order
CENT $.01
CHANGE
DECIMAL
decimal FORM
decimal PLACES
decimal POINT
DESCENDING order
DIME
DIVIDE
DOLLAR
DOT
HUNDREDTHS $\frac{1}{100}$, .01
MILLIONTHS $\frac{1}{100000}$, .000001
MIXED decimal 1.37
MONEY
MULTIPLY
NICKEL $.05
QUARTER $.25
REPEATING decimal
it goes on .272727.....
SUBTRACT
TENTHS $\frac{1}{10}$, .01
TERMINATING decimal - it stops
THOUSANDTHS $\frac{1}{1000}$ . .001
WORD PROBLEMS
ROUNDING OFF

State Demonstration Program
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Name _____ Period _____ Date _____

13) GERMAN MATHEMATICIANS

S L W K R O N E C K E R D
O I P E Q N C E P U L U I
A E L P I O A T G T R D R
P B D L I E N E K E N O I
L N G E X T T Y R I R L C
A I A R D H O S E O I F H
M Z U S O E R L T P E F L
B L S T U R K L S R M Q E
E N S P M O B I U S A U T
R G R A S S M A N Y N S L
T H I L B E R T W D N K S

Algebra
- DEDEKIND
- GRASSMAN
- KRONECKER
- NEOTHER

Calculus
- LIEBNIZ
- LIE

Geometry
- DURER
- HILBERT
- LAMBERT

Math
- CANTOR
- DIRICHLET
- RUDOLFF

Logic
- FREGE

Math/Science
- GAUSS
- KEPLER
- WEIERSTRASS

Topology
- KLEIN
- MOBIUS
- RIEMANN

State Demonstration Program
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Name _____ Period ___ Date _____

14) FAMOUS MATHEMATICIANS OF OTHER COUNTRIES

B C O P E R N I C U S G S T E V I N
E B O L Y A I B R A C H E K K L M C
R E G I O M O N T A N U S O V N O H
N O A R L R S E F B R O U W E R H E
O Q Q U E L E L E T G I R A R D A B
U P H U Y G E N S N I R U L C A M Y
L E D N E M O Q T R E U L E R W I C
L N A P I E R R S Z T U V S B X L H
I A B E L Y W E Y L Z A B K E C T E
B O H R L A B A C H E S K I H D O V
F L L E W X A M I N K O W S K I N E

Algebra
ABEL (Norwegien)
LORENTZ (Dutch)

Astronomy
BRACHE (Scandanavian)
COPERNICUS (Polish)

Calculus
BERNOULLI (Swiss)
BOHR (Dutch)
MAC LURIN (Scottish)

Geometry
BOLYAI (Hungarian)
HAMILTON (Irish)
LABACHESKI (Russian)
MINKOWSKI (Polish)
WEYL (Swiss)

Math
GREGORY (Scottish)
HUYGENS (Dutch)
STEVIN (Dutch)

Math/Science
MAXWELL (Scottish)
KOWALEWSKI (Russian)

Probability
CHEBYCHEV (Russian)
MENDEL (Austrian)

Statistics
QUELELET (Dutch)

Topology
BROUWER (Dutch)
EULER (Swiss)

Trigonometry
GIRARD (Dutch)
NAPIER (Scottish)
REGIOMONTANUS (Austrian)

State Demonstration Program
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Name _____ Period ____ Date _____

15) RATIOS, PROPORTIONS, PERCENTS

P R O P O R T I O N S L R E D U C E
Q E C O M M I S S I O N A O I P F C
U C R O S S P R O D U C T S S K R H
A D B C P R I N C I P A L E C D A A
N R I A E Q U I V A L E N T O I C N
T A X V T N T I M E W O R D U N T G
I T F H I T T S N P E R C E N T I E
T I W X O S I A C C R N A M T E O P
I O K S Q U I N G O R O L T O R N R
E S A L E S B O G E R E P G E E S O
S I M P L I F Y N C E E A E A S K P
A R S A H U N D R E D T H S R T A E
C O M P L E X D E C R E A S E L K R

RATIOS
- QUANTITIES compared
- by DIVISION
- SIMPLIFY means
- to REDUCE like FRACTIONS
- or CHANGE a COMPLEX
- fraction to an IMPROPER
- or PROPER fraction

PROPORTIONS
- EQUIVALENT ratios
- CROSS PRODUCTS are used
- to find an unknown

PERCENT
- means HUNDREDTHS
- WORD problems
- INTEREST equals PRINCIPAL times RATE times TIME (I=PRT)
- TAX
- SALES tax
- DISCOUNT
- COMMISSION
- PERCENTAGE
  - BATTING
  - SCORE on test
- Percent of INCREASE
- Percent of DECREASE

State Demonstration Program
Pittsburg Unified School District

Name _____ Period _____ Date _____

16) FAMOUS MEN OF ALGEBRA

A P A C I O L I X O P A L C
H L G B O O L E L F E O G C
M H K I N O E T H E R A B G
K J L H A R R I E T D C F A
H L K R O N E C K E R D E L
A B E L K W P O T S S E R O
Y D I O P H A N T U S M R I
Y A T A E C A R D A N O A S
A E L D E D E K I N D R R T
M G L O R E N T Z Z S G I T
O X E N I G R A S S M A N X
C H I E H S A H M E S N S Y

Algebra

AHMES (Egyptian)
ABEL (Norwegian)
ALKHOWARIZM (Arab)
BOOLE (English)
CARDANO (Italy)
DEDEKIND (German)
DEMORGAN (English)
DIOPHANTUS (Greek)
FERRARI (Italy)
GALOIS (French)
GRASSMAN (German)
HARRIET (English)
KHAYYAM (Persian)
KRONECKER (German)
LORENTZ (Dutch)
NOETHER (German)
PACIOLI (Italy)
Shih CHIEH (Chinese)

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17) FAMOUS MEN OF GEOMETRY

A R Y A B B A T A L C A R T E N P S C
A B P L T H M I N K O W S K I E T A A
R E O E A U I E D L H M P O S T O A Y
C L N G K B V P N E A A E B X H L P L
H T C E A R A U P A S M R S O A E Y E
Y R E N S I H C P O E C B D M L M T Y
T A L D N G E C H A C C A E Y E Y H L
U M E R E G R E P E P R H R R S D A B
S I T E R S O L L W V P A M T T E G I
H I L B E R T L A E S S U T U E S O R
A D E L A R D O T Y T O K S E S A R K
M O N G E B A P O L L O N I U S R A H
F G D U R E R D E S C A R T E S G S O
H A L L I W A E U C L I D C B A U L F
A B A R R O L L O F E R M A T L E N F
H A M I L T O N A S E I O N S T S A N

ADELARD of Bath (English)
APOLLONIUS (Greek)
ARCHYTUS (Greek)
ARY ABBATA (India)
BELTRAMI (Italy)
BIRKHOFF (U.S.)
BOLYAI (Hungarian)
BRIGGS (English)
CARTEN (French)
CAYLEY (English)
DESCARTES (French)
DESARGUES (French)
DURER (German)
EUCLID (Greek)
FERMAT (French)
HAMILTON (English)
HARDY (English)
HILBERT (German)
HERO of (Greek)
Alexandria
HIPPOCRATES (Greek)
KASNER (U.S.)
LABACHEVSKI (Russian)
LAMBERT (German)
LEGENDRE (French)
MENAECHMUS (Greek)
MINKOWSKI (Polish)
MONGE (French)
OMESME (French)
PAPPUS (Greek)
PONCELET (rench)
PLATO (Greek)
PTOLEMY (Greek)
PYTHAGORAS (Greek)
THALES (Greek)
UCCELLO (Italy)
WEYL (Swiss)

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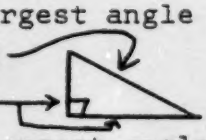
18) GEOMETRY I

T I N T E R S E C T I N G L M P T O
R C M O I S O S C E L E S P A A R S
A O B T U S E K O M I L K E L R I C
N R S U P P L E M E N T A R Y A A A
S R T A C R U W P V E F N P F L N L
V E R T I C A L L E G S G E A L G E
E S A S N P Q Y I C U L L N L E L N
R P I A T S E G M E N T E D L L E E
S O G S I D E S E X T E R I O R P T
A N H Y P O T E N U S E L C W I S O
L D T A C U T E T A S L G U O G P O
S I Q E Q U I L A T E R A L R H A N
I N T E R I O R R O M N A A D T C A
K G V E R T E X Y A L F F R O G E T

POINT
LINE
line SEGMENT
RAY
ANGLE
- VERTEX
- SIDES
- STRAIGHT 180°
- RIGHT 90°
- ACUTE $< 90°$
- OBTUSE $> 90°$
- VERTICAL
- COMPLIMENTARY (2 angles whose sum is 90°)
- SUPLEMENTARY (2 angles whose sum is 180°)
- Alternate INTERIOR
- Alternate EXTERIOR
- CORRESPONDING

TRIANGLE
- EQUILATERAL - all sides equal
- ISOSCELES - two aides equal
- SCALENE - no equal sides
- right - largest angle 90°
- HYPOTENUSE
- LEGS
- Obtuse - largest angle $> 90°$
- Acute - largest angle $< 90°$



Lines
- PARALLEL
- INTERSECTING
- PERPENDICULAR
- TRANSVERSAL
- SKEW

PLANE
SPACE

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19) GEOMETRY II

L E Q U I V A L E N T L A D P C C
A I U R C T R A P E Z O I D A O I
S K A L O P C A R S R C P O R R R
I S D O N O O P E C H O R D A R C
Z B R Y G C M T C E O N O E L E U
E A I D R C P D T N M S T G L S M
O F L S U I A I A T B T R R E P F
L R A N E R S A N E U R A E L O E
S A T K N C S M G R S U C E O N R
H D E W T L T E L P Q C T S G D E
A I R U L E R T E O U T O E R I N
P U A A O L F E D I A L R T A N C
E S L S W I K R P N R J O P M G E
K X S T R A I G H T E D G E F L A
P S I M I L I A R F I G U R E S K

QUADRILATERALS
- TRAPEZOID
- PARALLELOGRAM
- RECTANGLE
- RHOMBUS
- SQUARE

CIRCLE
- CENTERPOINT
- RADIUS
- DIAMETER
- CHORD
- CIRCUMFERENCE

SIMILAR FIGURES
- same SIZE
- same SHAPE
- CORRESPONDING parts

CONSTRUCT
- COMPASS
- STRAIGHTEDGE
- BISECT
- ARC
- CONGRUENT
- EQUIVALENT

DRAW
- RULER
- PROTRACTOR
- DEGREES

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20) POLYGONS

A D O D E C A G O N G O P N
G O N G O U N D E C A G O N
Q U A D R I L A T E R A L H
O G O N F I G U R E P G Y E
G C L O S E D S I D E S G P
O O T G L I N E A A N O O T
N N O A G O M G N A T N N A
H E X A G O N P G A A G O G
D E C A G O N O L G G A O O
N O N A G O N N E E O N A N
G O N A G S E G M E N T S A

What is a POLYGON?
A SIMPLE CLOSED FIGURE made up of LINE SEGMENTS
Polygons with 3 to 12 SIDES have special names.

Name	Number of Sides
TRIANGLE	3
QUADRILATERAL	4
PENTAGON	5
HEXAGON	6
HEPTAGON	7
OCTAGON	8
NONAGON	9
DECAGON	10
UNDECAGON	11
DODECAGON	12

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21) FAMOUS MEN OF CALCULUS

A B O H R L B P C D C E F G S
L J A C O B I L I A A N P P Y
H I I R J D K E U C V M O I L
E V O U R T E C B S A R Q O V
O K V U P O H M Q N L R R N E
Q O R S V Y W T O U I V D C S
S W L I E I A W X C E Z Y A T
E A Z A V O L T E R R A P R E
B E R N O U L L I O I I T E R
M A C L U R I N E S U A T C K
L I A M O Q S L E B E S Q U E
H J L N P A R C H I M E D E S

ARCHIMEDES (Greek)
BARROW (English)
BERNOULLI (Swiss)
BOHR (Dutch)
CAUCHY (Grench)
CAVALIERI (Italy)
DEMOCRITUS (Greek)
JACOBI (Italy)
KOWA (Japan)
LEBESQUE (French)
LIOUVILLE (French)
LIEBNIZ (German)
MAC LURIN (Scottish)
PICARD (French)
PIONCARE (French)
SYLVESTER (English)
VOLTERRA (Italy)
WALLIS (English)

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22) ENGLISH MEASUREMENT

B L E A G U E X Y I N C H O T
A D S A P T P L F O O T U Q A
R A R P O O U N C E E C N U B
R M G A I W U N C E E F D A L
E E I F M N X N P A N T R R E
L F L L T S T O D C W D E T S
S U L Y E H O G S H E A D Y P
G R C A W I N R C A N P W B O
A L O R C P O A U I P E E U O
L O R D A R K I P N F C I S N
L N D A T S E N L I N K G H L
O G A B O A R D E F O A H E C
N P E N N E Y W E I G H T L U
T E A S P O O N P O T T L E P .

Linear Measure	Weight	Dry Measure
INCH	GRAIN	pint
FOOT	DRAM	quart
FEET	OUNCE	PECK
YARD	POUND	BUSHEL
ROD	HUNDREDWEIGHT	barrel
FURLONG	TON	
CHAIN	SCUPLE	
LINK	PENNYWEIGHT	
MILE	**Liquid Measure**	
LEAGUE	GILL	TEASPOON
Square Measure	PINT	TABLESPOON
ACRE	QUART	POTTLE
TOWNSHIP	BARREL	CUP
Cubic Measure	HOGSHEAD	GALLON
BOARD foot		
CORD		

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23) FAMOUS MEN IN MATH

L A R I S T A R C H U S X O B O E T H I U S
F I B O N A C C I P S T A C H U S H I K E I
H H V F E R R O T A R A L K A S K I S L L H
Y E E R A T H O S T H E N E S L J O N E S U
P R N O P A T R U D O L F F K A A S A S L Y
A M N O U G T H R E D L M N A Z E N O S G G
T I R R E L M O N T E S S O R I S F D U F E
I T D I R I C H L E T T P E A N O T S R E N
A E R A M A N Y A M L A G R A N G E E I I S
G R E G O R Y E I L E N B E R G N O T V E E
A G O D E L N C A R R O L L H F B O N F I L
G U N T E R T R U S S E L L C A N T O R E N

AL-KASKI (Arab)
ARISTARCHUS (Greek)
BHASKARA (India)
BOETHIUS (Italy)
BONFIL (Arab)
CALANDRI (Italy)
CANTOR (German)
CARROLL (English)
CHUSHIKEI (Chinese)
DIRICHLET (German)
EILENBERG (U.S.)
ERATHOSTHENES (Greek)
FERRO (Italy)
FIBONACCI (Italy)
GODEL (U.S.)
GREGORY (Scottish)
GUNTER (English)
HERMITE (French)
HYPATIA (Greek)
HUYGENS (Dutch)
JONES (English)
LAGRANGE (French)
MONTESSORI (Italy)
OUGHTRED (English)
PEANO (Italy)
RAMANYAM (India)
RUSSELL (English)
RUDOLFF (German)
STEVIN (Dutch)
TARTAGLIA (Italy)
VENN (English)
ZENO (Greek)

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24) METRIC SYSTEM

S Q U A R E M I L L I K C K
O A K I L O G R A M M D E I
M I L L I L I T E R A E N L
I E L F D D E C I S S C T O
L I T E R C E N T I S I I C
L C E R L E A H G R A M M A
I C N L I K N E F T U A E P
M E T E R C O C E C H L T A
E D E C A S D T H K A S E C
T S U S K I L O M E T E R I
E M I L L I G R A M H I T T
R H E C T A R E C U B I C Y

The FRENCH invented the METRIC system. It is based on our base TEN and works by moving the DECIMAL point left or right when changing units.

Prefixes

MILLI - m
CENTI - c
DECI - d
DECA - dk
HECTO - h
KILO - k

Common Units

LENGTH

MILLIMETER - mm
CENTIMETER - cm
METER - m
KILOMETER - km

MASS

MILLIGRAM
GRAM
KILOGRAM

SQUARE measure

HECTARE

CUBIC measure

C.C. cubic centimeter
cubic meter

CAPACITY

MILLILITER
LITER

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25) FAMOUS MATHEMATICIANS IN SCIENCE

W L A L B I R U N E U D O X U S T
I A K O R O P M A X W E L L G F E
E N L S A R I S T A R C H U S O L
N A B A C O N T W A G O O D Z U L
E X A S H A N N O N A P L A E R E
R A N A E R W T O N U E L L B I R
E G N E W T O N D F S R E E E E K
S O E I N S T E I N S N R M H R K
U R K O W A L E W S K I I B E U E
S A E G A L I L L E O C T E L L P
U S R F R A N K L I N U H R Y A L
N W E I E R S T R A S S H T O M E
G A L T O N K E L V I N I J K L R

AL-BIRUN (Afghanistan)
ANAXAGORAS (Greek)
ARISTARCHUS (Greek)
ATWOOD (English)
BRACHE (Scandavian)
BACON (English)
BANNEKER (U.S.)
COPERNICUS (Polish)
D'ALEMBERT (Grench)
EINSTEIN (U.S.)
EUDOXUS (Greek)
FOURIER (French)
FRANKLIN (U.S.)
GALILLEO (Italy)
GALTON (English)
GAUSS (German)
HOLLERITH (U.S.)
KELVIN (English)
KEPLER (German)
KOWALEWSKI (Russian)
MAXWELL (Scottish)
NEWTON (English)
SHANNON (U.S.)
SUSUNG (Chinese)
SZEBEHELY (Russian)
TELLER (U.S.)
ULAM (U.S.)
WEIERSTRASS (German)
WIENER (U.S.)

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26) FAMOUS MEN IN SOME DIFFERENT FIELDS OF MATH

D E M O I R E L L A P L A C E L G
D C H E B Y C H E V B U S H W K I
E N A G E L K L E I N O P S H B R
M E N D E L M E N E L A U S I A A
E W A L M N Q U E T E L E T T B R
R E G I O M O N T A N U S M E B D
E A L G K I T A L D I N Q O H A J
A V S A L E S P A S C A L B E G O
S E U L E R N I J O R D T I A E R
F R E G E R I E M A N N K U D L D
S T H I P P A R C H U S X S Y W A
B R O U W E R V O N N E U M A N N

Computers
AIKEN (U.S.)
BABBAGE (English)
BUSH (U.S.)
VON NUEMANN (U.S.)

Logic
FREGE (German)
NAGEL (U.S.)

Probability Statistics
CHEBYCHEV (Russian)
DE MERE (French)
DE MOIRE (French)
LAPLACE (French)
MENDEL (Austrian)
PASCAL (French
QUETELET (Dutch)
WEAVER (U.S.)
WHITEHEAD (English)

Topology
BROUWER (Dutch)
EULER (Swiss)
JORDAN (French)
KLEIN (German)
MOBIUS (German)
REIMANN (German)

Trigonometry
AL-DIN (Arab)
GIRARD (Dutch)
HIPPARCHUS (Greek)
MENELAUS (Greek)
REGIOMONTANUS (Austrian)
NAPIER (Scottish)
VIETA (French)

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27) MATH CLASSES

A L G E B R A L S A L K X D A O P P O B S I
N S T A T I S T I C S Q E H R N M E L U K N
O M S T O P O L O G Y I L O I O P L A S Y F
N C A L C U L U S R L B A M T L L L S I S O
E I A T T R O U V P E O C O H I A I Y N Y R
U L F R H E G W P G X O I L M N R P P E R M
C O F Z T A I A L E B L T O E E G T R S T A
L B I C D E C A E S B E Y G T A E I O S E L
I R N C O N S U M E R A L I I R T C J I M X
D E E F B A S I C T G N A C C H N A E J O P
E P D K L B A N A C H M N A E D I L C U E O
A Y D I F F E R E N T I A L N O P Q T R G P
N H Y P E R C O M P L E X S T U V W I X Y X
Z A B P R O B A B I L I T Y C D E F V G H O
T R I G O N O M E T R Y C O M P U T E R I A

AFFINED geometry
ALGEBRA
ANALYTICAL geometry
APPLIED math
ARITHMETIC
BANACH algebra
BASIC math
BOOLEAN algebra
BUSINESS math
CALCULUS
CARTESIAN geometry
COMPUTER programing
CONSUMER math
DIFFERENTIAL calculus
EUCLIDEAN geometry
ELLIPTICAL geometry
GEOMETRY
HOMOLOGICAL algebra
HYPERBOLIC geometry
HYPERCOMPLEX algebra
INTREGAL calculus
INFORMAL geometry
LINEAR programing
LOGIC
MATH
NON-EUCLIDEAN
PROBABILITY
PROJECTIVE geometry
PURE math
SET theory
STATISTICS
TOPOLOGY
TRIGONOMETRY

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28) CAREERS USING MATH

M A T H E M A T I C I A N S P A C E A
L A S A S T R O N O M E R T T G L I S
A R N C O N T R A C T O R A E E G N T
R A B A C C O U N T A N T T A O E S P
C P R O G R A M M E R O A I C G O U R
H H O Q T E L L E R T F C S H R L R A
I Y K P L A R A R T I T T T E A O A G
T S E S C I E N T I S T U I R P G N R
E I R C A S H I E R T I A C T H I C O
C C A R T O G R A P H E R I O E S E M
T I E N G I N E E R L O Y A W R T J M
L S B O O K K E E P E R L N L K S K E
A T E C H N I C I A N S U R V E Y O R

ACCOUNTANT
ACTUARY
ARCHITECT
ARTIST
ASTRONOMER
bank TELLER
BOOKKEEPER
BROKER
CARTOGRAPHER
CASHIER
CONTRACTOR
ENGINEER
GEOGRAPHER
GEOLOGIST
INSURANCE agent
MATHEMATICIANS
MANAGER
PHYSICIST
PROGRAMMER (computer)
SCIENTIST
STATISTICIAN
SURVEYOR
SPACE technologist
TEACHER
research TECHNICIAN

And just about everybody else. Everyday there is something you do that relies on Math.

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29) PERIMETERS, AREA, SURFACE AREA, VOLUME

C P E R I M E T E R R S F
P Y R A M I D L C U B I C
D F C A L K H E I G H T U
I O V L W T U N A S T S B
S R O B I Q I G S O E U E
T M L A D N M T Q L F R P
A U U S T W D H U I A F R
N L M E H A R E A D C A I
C A E L I N E A R K E C S
E S T S P H E R E L S E M
A P E X L L C O N E A L K

FORMULAS

PERIMETER
- DISTANCE around a figure
- LINEAR measure

AREA
- SQUARE measure
- BASE
- HEIGHT
- LENGTH
- WIDTH
- ALTITUDE

SURFACE area
- area of all the FACES of a SOLID
- square measure

VOLUME
- CUBIC measure
- APEX
- PYRAMID
- PRISM
- CYCLINDER
- CONE
- CUBE
- SPHERE

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30) ADVANCED TOPICS PRE-ALGEBRA

A X Q S N O I T C U R T S N O C E T T S
O R I G I N A E T I R R A T I O N A L S
B C T N I O J S I D E L E M E N T S O O
U T L O L S T R A I G H T E D G E P X L
T R O I E E C A T E F E V N U R A W W U
I I F T N U H I L H I F O R M U L A S T
F G S C R E N N E V N D D M H E G C Q I
E O U E R G A I E N I S O C E N E K U O
U N B S A R Q R O S T I I J K T B G A N
I O S R S A P O R N E I C N H P R H R R
T M E E T P O W E R S O F T E N A Y E O
I E T T N H D H N K Z C P I P V I J R T
S T Z N E I N F I N I T E T C L N C O C
O R X I G N N D L M P L M N E L T O O A
P Y T H A G O R E A N T H E O R E M T R
Y W S E T A N I D R O O C G X Q G P S T
M O R D I N A T E M E V E N G D E A A O
W L G L V P A S S I C S B A D G R S E R
L A E G E Q U I V A L E N T C E S S C P

ALGEBRA
LIKE terms
IRRATIONAL numbers
LINEAR equations
FORMULAS
SQUARE roots
SOLUTIONS

GRAPHING
COORDINATES
ORDINATE
ABSCISSA
ORIGIN

SETS
DISJOINT
INTERSECTION
UNION
SUBSET
FINITE
INFINITE
NULL
VENN Diagram
EQUIVALENT sets
ELEMENT

INTEGERS
POSITIVE
NEGATIVE
SCIENTIFIC NOTATION
POWERS OF TEN

GEOMETRY
CONGRUENT
CONSTRUCTIONS
COMPASS
PROTRACTOR
STRAIGHTEDGE
PYTHAGOREAN THEOREM

TRIGONOMETRY
SINE
COSINE
TANGENT

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